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United States Patent [19][11] **Patent Number:** 5,822,319**Nagami et al.**[45] **Date of Patent:** Oct. 13, 1998

[54] **ROUTER DEVICE AND DATAGRAM
TRANSFER METHOD FOR DATA
COMMUNICATION NETWORK SYSTEM**

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[30] **Foreign Application Priority Data**

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|---------------|------|-------|----------|
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[52] U.S. Cl. **370/392; 370/397; 370/409; 370/474**

[58] **Field of Search** 370/355, 389, 370/392, 395, 396, 397, 398, 399, 400, 401, 402, 409, 410, 412, 465, 474, 905

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[57] **ABSTRACT**

A router device realizing a datagram transfer method for improving the datagram transfer efficiency by ascertaining the transfer target and/or the requested quality of service without referring to the datagram content. The router device has network interfaces connected with networks including at least one virtual connection oriented network, a table for registering a correspondence between a virtual connection identifier and a transfer target network interface and/or a quality of service, a connection identifier analysis unit for determining a transfer target network interface and/or a quality of service for a datagram entered from one virtual connection, by referring to the table according to a virtual connection identifier of that one virtual connection. The datagram can be transferred to the determined transfer target network interface, while applying a priority control for datagrams to be transferred by the router device according to the determined quality of service.

38 Claims, 17 Drawing Sheets

